TABLE 1-continued

Exemplary Assignment of Information Element Identifiers (IEI)

Type of Dedicated MMS Message	IEI-Code
MMS session establishment	22
MMS receipt (of establishment)	23
MMS explicit notification-query	24
MMS ACK/NACK of submission (1)	25
MMS ACK/NACK of submission (2)	26
MMS ACK/NACK of delivery	27
MMS pull-push	28

FIG. 2 shows the structure of an SMS short message of the first type A in GSM, in accordance with a second exemplary method of the present invention.

The exemplary embodiment shown in FIG. 2 is similar to the first exemplary embodiment described above, except that, in the example for the MMS session establishment, it includes a WCMP (wireless control message protocol) user data header having an embedded MMS protocol.

Identification UHI of this user data header is executed in the form of hexadecimal 09, in accordance with the standards GSM 03.40 V7.1.0 (November 1998) Technical Realization of the Short Message Service (SMS); Point-to-Point (PP) and 3G 23.040 V3.2.0 (October 1999) Technical Realization of the Short Message Service (SMS); and Point-to-Point (PP).

As shown in FIG. 2, user data header SM-DH begins with user data header length UHL, followed by identification UHI of the first header, which may include, for example, hex. 09 for WCMP. This is then followed by the length of the user data header element UHEL, which may include, for example, the necessary length of the WCMP header (including the entire embedded MMS protocol). Finally, the WCMP fields in the MMS protocol are provided, which are referred to as MMSP. These include a designation MMSI (also called an MMS identifier), which indicates that an MMS protocol is implemented using the WCMP field. The subsequent identifier MMSNI indicates the type of MMS protocol. It therefore specifies the type of MMS message, and consequently corresponds to the content of parameter UHI in the first exemplary embodiment. Parameter MMSC indicates the user ID and profile ID in the example of MMS session establishment.

Similarly to the first exemplary embodiment according to the present invention, a unique indicator should be defined for each type of message.

A mapping table may appear as follows:

TABLE 2

Exemplary Assignment of MMSNI Codes

Type of Dedicated MMS Message	MMSNI-Code
MMS user message	0
MMS notification	1
MMS session establishment	2
MMS receipt (of establishment)	3
MMS explicit notification-query	4
MMS ACK/NACK of submission (1)	5
MMS ACK/NACK of submission (2)	6
MMS ACK/NACK of delivery	7
MMS pull-push	8

FIG. 3 shows the structure of an SMS short message of the second type B in GSM, in accordance with a third exemplary method of the present invention.

While the first and second exemplary embodiments described above use the user data header to produce MMS notifications, the TP-PID may be used for identifying such a

notification. If so, the service center participates in the protocol whereas, in the first and second exemplary embodiments described above, the service center only forwards the data in a transparent manner.

In the third exemplary method according to the present invention, it is presumed that the MMS relay executes a special MMS protocol with the SMSC, e.g., notifications for the user are transmitted from the MMS relay to the SMSC in a special MMS format, to transmit these messages to the user or transmit notifications from the user to the MMS relay, via the SMSC.

In the SMSC, these notifications are then converted from SMS into the MMS format (and vice versa), in a manner similar to how SMS is converted to fax.

For this purpose, parameter TP-PID in SMS short message SM' is set to a specific value MMSI for the MMS service. This specification establishes, for both the transmitter and receiver, that further information specific to MMS protocol follows in the user data. The appearance of these may be as follows.

An additional MMS message identifier MMNSI' may indicate the type of notification, e.g., an MMS session establishment, which is sent from the user to the MMS relay. For example, these identifiers MMNSI' may again be constructed similar to the parameters MMSNI in Table 2, and may use 8 bits for display. A field MMSL, which may be, e.g., 8 bits wide, defines the length of the following MMS information items, MMSC. These are independent of the type of notification. With respect to the MMS session establishment, the user ID and the ID of the desired profile may be communicated in MMSC, as described above.

Depending on whether telematic interworking or message handling is desired, the TP-PID may be in the form <001xxxxx> (e.g. <00110011>) or <01xxxxxx> (e.g. <01001000>).

Although three exemplary methods according to the present invention are described above, the present invention is not limited to these exemplary embodiments, but rather may be modified in various ways.

For example, the present invention is not limited to telecommunications networks and their services. In addition, the structure of short messages may be varied. Other criteria, such as network utilization, etc., may also be used to determine which messages of the first message service are to be sent by the second message service.

What is claimed is:

1. A method for transmitting messages in a telecommunications network including a Multimedia Messaging Service (MMS) and a Short Message Service (SMS), said messages including MMS messages in an MMS message format and SMS messages in an SMS message format specified by Global System for Mobile Communications, the method comprising:

structuring the SMS message to include a header portion, a data portion, and a user data header, wherein the user data header is within the data portion;

including an MMS message in said data portion of said SMS message;

including in said data portion of said SMS message an MMS message type identifier, said MMS message type identifier providing an identification of a type of said MMS message, the type of said MMS message selected from an MMS notification message, an MMS notification-query and an MMS acknowledgement message;

including in said data portion of said SMS message an MMS identifier for indicating that said MMS message format is used for said MMS message in said;